

IN THE CLAIMS:

Please further amend the claims as follows.

1. (Currently Amended) An image processing apparatus for executing an error diffusion process to color data having a plurality of density components including at least first and second density components, comprising:

a processor and a memory;

a first processing unit that modulates at least one of a quantization threshold value and a quantization diffusion coefficient on the basis of the first density component, and executes the error diffusion process to the first density component by using at least one of the modulated quantization threshold value and the modulated quantization diffusion coefficient;

a second processing unit that executes the error diffusion process to the second density component by using a fixed ~~modulated~~ quantization threshold value and a fixed ~~modulated~~ quantization diffusion coefficient, wherein the error diffusion process executed by the second processing unit requires a lighter processing load than the error diffusion process executed by the first processing unit; and

an error diffusion processing control unit that controls to execute, by the first processing unit, the error diffusion process to the first density component, and controls to execute, by the second processing unit, the error diffusion process to the second density component,

wherein the first and second density components have respective different component types and wherein one dot output based on the first density component has a lower density than one dot output based on the second density component,

wherein the modulated quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the modulated quantization threshold value to neighboring pixels, and

wherein the fixed ~~modulated~~ quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the fixed ~~modulated~~ quantization threshold value to neighboring pixels.

2. to 6. (Canceled)

7. (Currently Amended) An image processing method of executing an error diffusion process to color data having a plurality of density components including at least first and second density components, comprising:

a computer executing the steps comprising:

a first processing step of modulating at least one of a quantization threshold value and a quantization diffusion coefficient on the basis of the first density component, and executes the error diffusion process to the first density component by using at least one of the modulated quantization threshold value and the modulated quantization diffusion coefficient;

a second processing step of executing the error diffusion process to the second density component by using a fixed modulated quantization threshold value and a

fixed ~~modulated~~ quantization diffusion coefficient, wherein the error diffusion process executed by the second processing step requires a lighter processing load than the error diffusion process executed by the first processing step; and

an error diffusion processing control step of controlling to execute, by the first processing step, the error diffusion process to the first density component, and controlling to execute, by the second processing step, the error diffusion process to the second density component,

wherein the first and second density components have respective different component types and wherein one dot output based on the first density component has a lower density than one dot output based on the second density component,

wherein the modulated quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the modulated quantization threshold value to neighboring pixels, and

wherein the fixed ~~modulated~~ quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the fixed ~~modulated~~ quantization threshold value to neighboring pixels.

8. to 12. (Canceled)

13. (Currently Amended) A computer-readable storage medium on which is stored an image processing program for executing an error diffusion process to color data having a plurality of density components including at least first and second density components, wherein said program comprises:

a first processing step of modulating at least one of a quantization threshold value and a quantization diffusion coefficient on the basis of the first density component, and executes the error diffusion process to the first density component by using at least one of the modulated quantization threshold value and the modulated quantization diffusion coefficient;

a second processing step of executing the error diffusion process to the second density component by using a fixed ~~modulated~~ quantization threshold value and a fixed ~~modulated~~ quantization diffusion coefficient, wherein the error diffusion process executed by the second processing step requires a lighter processing load than the error diffusion process executed by the first processing step; and

an error diffusion processing control step of controlling to execute, by the first processing step, the error diffusion process to the first density component, and controlling to execute, by the second processing step, the error diffusion process to the second density component,

wherein the first and second density components have respective different component types and wherein one dot output based on the first density component has a lower density than one dot output based on the second density component,

wherein the modulated quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the modulated quantization threshold value to neighboring pixels, and

wherein the fixed ~~modulated~~ quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the fixed ~~modulated~~ quantization threshold value to neighboring pixels.

14. to 24. (Canceled)

25. (Currently Amended) An image processing apparatus for executing an error diffusion process to color data having a plurality of density components including at least first and second density components, comprising:

a processor and a memory;

a first processing unit that modulates at least one of a quantization threshold value and a quantization diffusion coefficient on the basis of the first density component, and executes the error diffusion process to the first density component by using at least one of the modulated quantization threshold value and the modulated quantization diffusion coefficient;

a second processing unit that executes the error diffusion process to the second density component by using a fixed ~~modulated~~ quantization threshold value and a fixed ~~modulated~~ quantization diffusion coefficient, wherein the error diffusion process executed by the second processing unit requires a lighter processing load than the error diffusion process executed by the first processing unit; and

an error diffusion processing control unit that controls to execute, by the first processing unit, the error diffusion process to the first density component, and controls to execute, by the second processing unit, the error diffusion process to the second density component,

wherein the first and second density components have respective different component types and wherein one droplet output based on the first density component has a smaller size than one droplet output based on the second density component,

wherein the modulated quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the modulated quantization threshold value to neighboring pixels, and

wherein the fixed ~~modulated~~ quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the fixed ~~modulated~~ quantization threshold value to neighboring pixels.

26. (Currently Amended) A method for an image processing apparatus for executing an error diffusion process to color data having a plurality of density components including at least first and second density components, comprising:

a computer performing the steps comprising:

a first processing step for modulating at least one of a quantization threshold value and a quantization diffusion coefficient on the basis of the first density component, and executes the error diffusion to the first density component by using at least one of the modulated quantization threshold value and the modulated quantization diffusion coefficient;

a second processing step for executing the error diffusion process to the second density component by using a fixed ~~modulated~~ quantization threshold value and a fixed ~~modulated~~ quantization diffusion coefficient, wherein the error diffusion process executed by the second processing step requires a lighter processing load than the error diffusion process executed by the first processing step; and

an error diffusion processing control step for controlling to execute, by the first processing step, the error diffusion process to the first density component, and

controlling to execute, by the second processing step, the error diffusion process to the second density component,

wherein the first and second density components have respective different component types and wherein one droplet output based on the first density component has a smaller size than one droplet output based on the second density component, ~~and~~

wherein the modulated quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the modulated quantization threshold value to neighboring pixels, and

wherein the fixed ~~modulated~~ quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the fixed ~~modulated~~ quantization threshold value to neighboring pixels.

27. (Currently Amended) A computer-readable storage medium on which is stored a program for executing an error diffusion process to color data having a plurality of density components including at least first and second density components, the program comprising:

a first processing step for modulating at least one of a quantization threshold value and a quantization diffusion coefficient on the basis of the first density component, and executes the error diffusion process to the first density component by using at least one of the modulated quantization threshold value and the modulated quantization diffusion coefficient;

a second processing step for executing the error diffusion process to the second density component by using a fixed ~~modulated~~ quantization threshold value and a

fixed ~~modulated~~ quantization diffusion coefficient, wherein the error diffusion process executed by the second processing step requires a lighter processing load than the error diffusion process executed by the first processing step; and

an error diffusion processing control step for controlling to execute, by the first processing step, the error diffusion process to the first density component, and controlling to execute, by the second processing step, the error diffusion process to the second density component,

wherein the first and second density components have respective different component types and wherein one droplet output based on the first density component has a smaller size than one droplet output based on the second density component,

wherein the modulated quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the modulated quantization threshold value to neighboring pixels, and

wherein the fixed ~~modulated~~ quantization diffusion coefficient is used to diffuse an error caused by a quantization process which is performed using the fixed ~~modulated~~ quantization threshold value to neighboring pixels.

28. (Previously Presented) An apparatus according to claim 1, wherein the plurality of density components correspond to respective different colorants used in image formation, and wherein a first one of the colorants corresponding to the first density component and a second one of the colorants corresponding to the second density component have similar colors and wherein the first colorant has a lower density than the second colorant.



29. (Previously Presented) An apparatus according to claim 1, wherein one dot output based on the first density component has a smaller size than one dot based on the second density component.

30. (Canceled)